UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

10098806

4-WD-SSMB

MEMORANDUM

SUBJECT: Five-Year Review Report
Powersville Site
Peach County, Georgia
GAD980496954

FROM: Randall Chaffins, Chief
AL/GA/MS Section

THRU: Carol Monell, Chief
South Site Management Branch

TO: Winston Smith, Director
Waste Management Division

Attached please find a copy of the Five Year Review Report for the Powersville Superfund Site located in Peach County, Georgia. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) provides that remedial actions which result in any hazardous substances, pollutants, or contaminants remaining at a site above levels that allow for unlimited use and unrestricted exposure be reviewed every five years to ensure protection of human health and the environment.

Work at this former landfill consisted of capping with clay material, with engineering controls including grading and drainage. In addition, monitoring wells were installed and regular monitoring of groundwater has been performed since the remedy was put in place in 1992. Currently, lead and chromium are present in groundwater above action levels.

This Five-Year Review is the second performed at this site, with the first conducted January 6, 1998. As shown in the report, it has been determined that the remedial action taken at this Site continues to be protective of human health and the environment. No deficiencies were noted during the five-year review. It is recommended that the report be approved.

Winston Smith, Director
Waste Management Division

9/12/03
Date

# Final
# Five-Year Review Report

## First Five-Year Review Report

## For

## Powersville Site
## (EPA ID #: GAD980496954)

## Peach County, Georgia

## August 2003

**Prepared by:**
US Army Corps of Engineers
Savannah District
P. O. Box 889
Savannah, GA 31402-0889

**Approved by:**

Winston Smith,
Director, Waste Management Division
US EPA, Region 4

**Date:**

9/12/03

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## Tables



## Attachments

## List of Acronyms

| | |
|---|---|
| ARAR | Applicable or Relevant and Appropriate Requirement |
| CD | Consent Decree |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CFR | Code of Federal Regulations |
| COC | Chain of Custody |
| EPA | Environmental Protection Agency |
| EPD | Georgia Environmental Protection Division |
| GCL | Geosynthetic Clay Liner |
| HRS | Hazardous Ranking System |
| MCL | Maximum Contaminant Level |
| MCLG | Maximum Contaminant Level Goal |
| MDL | Method Detection Limit |
| NCP | National Oil and Hazardous Substances Pollution Contingency Plan |
| NPL | National Priorities List |
| O&M | Operations and Maintenance |
| OUs | Operable Units |
| PCE | tetrachloroethene |
| PRP | Potentially Responsible Party |
| QA/QC | Quality assurance / Quality Control |
| RA | Remedial Action |
| RCRA | Resource Conservation and Recovery Act |
| RD | Remedial Design |
| RI/FS | Remedial Investigation/ Feasibility Study |
| ROD | Record of Decision |
| SARA | Superfund Amendment and Reauthorization Act |
| SVOCs | Semi-Volatile Organic Compounds |
| TCE | trichloroethene |
| UAO | Unilateral Administrative Order |
| USACE | U.S. Army Corps of Engineers |
| VOCs | Volatile Organic Compounds |

## Executive Summary

This is the second five-year review for the Powersville Superfund Site. The trigger for this statutory review is the 5th anniversary of the first five-year review as shown in EPA's WasteLAN database: 06 January 1998. Hazardous substances, pollutants, or contaminants are left on site above levels that allow for unlimited use and unrestricted exposure. All remedies have been constructed and continue to operate as intended

Based on the data reviewed, the site inspection and interviews with the PRP, the remedy is functioning as intended by the ROD. There have been no changes in the physical conditions of the site that would affect the protectiveness of the remedy. ARARs for drinking water and surface water were evaluated to determine if the remedy is still protective. Based on the ARAR review, no values of drinking water standards (i.e. MCLs) have changed to any degree that would negatively affect the protection of the remedy. Ground-water contamination at the site persists above MCLs. The organic groundwater contaminants that were above regulatory limits have attenuated to levels below action levels. The Lead and Chromium continue above action levels but do not appear to be migrating.

# Five-Year Review Summary Form

| SITE IDENTIFICATION | | |
|---|---|---|
| Site name: Powersville Site (GA HWY 49 N, Peach County, GA 31074) | | |
| EPA ID: GAD980496954 | | |
| Region: IV | State: GA | City/County: NA, Peach County |
| **SITE STATUS** | | |
| NPL status: Currently on the Final NPL | | |
| Remediation status (under construction, operating, complete): Complete | | |
| Multiple OU's*: NO Construction completion date: 17 September 1993 | | |
| Has site been put into reuse? NO | | |
| **REVIEW STATUS** | | |
| Lead agency (EPA, State, Tribe Federal agency): EPA | | |
| Author name: Sherry McCumber-Kahn | | |
| Author title: Environmental Engineer | Author affiliation: US Army Corps of Engineers, Savannah District | |
| Review period: 4 June 2003 to 31 July 2003 | | |
| Date(s) of site inspection: 11 June 2003 | | |
| Type of Review: Post- SARA | | |
| Review Number: 2 (second) | | |
| Triggering action event: 5 year anniversary to first 5 year review | | |
| Trigger action date (from WasteLAN): 01/06/1998 | | |
| Due date: 7/31/ 2003 | | |

* "OU" refers to operable unit.

**Five –Year Review Summary Form, cont,d.**

**Issues:**

Based on the data reviewed, the site inspection and interviews with the PRP, the remedy is functioning as intended by the ROD. There have been no changes in the physical conditions of the site that would affect the protectiveness of the remedy. ARARs for drinking water and surface water were evaluated to determine if the remedy is still protective. Based on the ARAR review, no values of drinking water standards (i.e. MCLs) have changed to any degree that would negatively affect the protection of the remedy. Ground-water contamination at the site persists above MCLs.

**Recommendations and Follow-up Actions:**

Continued groundwater monitoring is required to ensure contaminants are not migrating offsite. Need to follow-up on institutional controls to make sure restrictions have not been violated and that new property owners are aware of site restrictions.

**Protectiveness Statements:**

The remedial actions at the site are expected to continue to be protective of human health and the environment. Contaminant levels in ground water of the organic contaminants of concern appear to have declined to levels that should reach acceptable risk based concentrations through natural attenuation. Though the metals concentrations tend to fluctuate, there is no evidence of migration.

**Other Comments:**

None

# I. Introduction

The United States Environmental Protection Agency (EPA) Region IV has conducted a second five-year review of the remedial actions implemented at the Powersville Site (former landfill). The U.S. Army Corps of Engineers, Savannah District, provided technical support for the review. This review was conducted from June 2003 through August 2003. This report documents the results of that review. The purpose of a five-year review is to determine whether the remedy at a site is protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in Five-Year Review reports. In addition, Five-Year Review Reports identify issues found during the review, if any, and identify recommendations to address them.

EPA conducted this review pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), section 300.430(f)(4)(ii). Because a remedial action was selected that allows contaminants to remain on site above levels that allow for unlimited use and unrestricted exposure, EPA is required to review such action no less than every five years after the initiation of the selected remedial action. The statutory five-year review requirement was added to CERCLA as part of the Superfund Amendments and Reauthorization Act of 1986 (SARA). EPA conducts statutory reviews when both of the following conditions are true: 1) upon completion of the remedial action, hazardous substances, pollutants or contaminants will remain above levels that allow for unlimited use and unrestricted exposure; 2) the record of decision (ROD) for the site was signed on or after 17 October 1986 (the effective date of SARA).

This is the second five-year review for the Powersville Superfund Site. The trigger for this statutory review is the fifth anniversary of the first five-year review, as shown in EPA's WasteLAN database: 06 January 1998. Hazardous substances, pollutants, or contaminants are left on site above levels that allow for unlimited use and unrestricted exposure. All remedies have been constructed and continue to operate as intended.

## II. Site Chronology

Table 1 lists the chronology of events for the Powersville Superfund Site.

**Table 1: Chronology of Site Events**

| Event | Start Date | Completion Date |
|---|---|---|
| Site Inspection | | 12-01-1979 |
| Discovery | | 12-01-1979 |
| HRS Package | | 06/24/1983 |
| Proposal to NPL | | 09/08/1983 |
| Preliminary Assessment | | 04/01/1984 |
| NPL RP Search | | 05/15/1984 |
| Final Listing NPL | | 09/21/1984 |
| RI/FS Negotiations | 11/15/1984 | 11/15/1985 |
| Community Involvement | 12/28/1984 | 08/30/1987 |
| Record of Decision | | 09/30/1987 |
| PRP RI/FS | 12/28/1984 | 09/30/1987 |
| RD/RA Negotiations | 08/25/1987 | 01/29/1988 |
| Health Assessment | 12/15/87 | 04/15/1988 |
| Administrative Records | 05/16/1988 | 05/16/1988 |
| Consent Decree | 05/23/1988 | 12/13/1988 |
| Admin Order on Consent | | 08/16/1990 |
| PRP RD | 12/02/1988 | 01/08/1991 |
| Removal Assessment | 09/05/1991 | 09/05/1991 |
| PRP RA | 01/08/1991 | 09/30/1992 |
| Prelim Close-Out REP Prepared | | 06/30/1993 |
| Close Out Report | | 09/17/1993 |
| PRP RA | 01/08/1991 | 09/17/1993 |
| Five Year Review | 11/01/1996 | 01/06/1998 |

## III. Background

The Powersville Landfill, which occupies approximately 15 acres, is located in Peach County, Georgia. General crop farming is the major agricultural practice in the region. However, cattle farms and orchards are also common. Locally the Providence aquifer system is a source of water for both consumption and irrigation. From the early 1940s to 1969, the landfill site was a borrow pit which provided sand and fill material to the county for local use. During 1969, Peach County began operating the site as a sanitary landfill receiving municipal and industrial wastes. In December 1972, the Georgia Department of Natural Resources Environmental Protection Division suggested the separation and maintenance of areas for pesticides and associated wastes, which was attained. Disposal records indicate pesticide manufacturing wastes were disposed of in the municipal section of the landfill prior to June 1973 and in the hazardous waste area between June 1973 and 1978. Neither the quantity nor the location of the waste in the municipal landfill is known. The landfill was closed in 1979 due to its location in a highly permeable sand and gravel aquifer. The primary contaminants of concern affecting the soil and groundwater include: VOCs (vinyl chloride), other organics, heavy metals (lead and chromium), and pesticides.

The selected remedial action for this site included: surface capping of hazardous waste and municipal fill areas using artificial material or clay, with grading, drainage and closure; installation of eight additional monitor wells (at a minimum) in the upper region of the aquifer to determine cap area leaching or migration; and extension of the municipal water supply pipeline as an alternative water supply. The State of Georgia indicated an inability to pay their portion of the costs, which was 50%. The total present worth for this remedial action is $4,000,000 with present worth O & M of $577,013.

The recommended alternatives for the Powersville Landfill Site included:

- Surface capping of the hazardous waste and municipal fill areas. The cap for the municipal area will be constructed in accordance with EPA guidance document, covers for uncontrolled hazardous waste sites, EPA/540/2-85/002. The cap for the hazardous waste area will be constructed using the same guidance indicated above with the additional stipulation that the top liner be constructed with an artificial material or equivalent two-foot thick layer of compacted clay. Closure will be in accordance with applicable state and federal regulations.
- Grading of the area to ensure proper slope and drainage of water off of the cap. Drainage would be designed to direct surface runoff toward the present natural drainage channels.
- Installation of a minimum of eight additional monitor wells in the upper region of the aquifer to determine if contaminants are leaching or migrating from the capped areas.
- Provision of an alternate drinking water source. Extend closest municipal water source to affected property owners.
- Site deed restrictions to prevent any drilling or construction activities that would compromise the integrity of the remedy. Deed restrictions need also be to prohibit the drilling of water wells in the area between the site and Mule Creek. The area in which groundwater is likely to be affected by the landfill.
- Operation and maintenance (O&M) will include regular inspection of the cap for signs of erosion, settlement or deterioration. Inspections should be conducted frequently during

the first six months. Periodic monitoring of new and existing monitor wells was required. (Powersville Site Abstract to ROD http://cfpub.epa.gov/superrods/rodinfo.cfm?mRod=04016681987ROD029 )

## IV. Remedial Actions

### Remedy Selection

The original selected Record of Decision was signed on September 30, 1987. The selected remedial action for this site included surface cover systems for the hazardous waste and municipal landfill areas, installation of groundwater monitoring wells, provision of an alternative water source, deed restrictions, and O&M plan. The function of this remedy is to ensure that there is no exposure to or migration of contaminants.

The major components of the selected remedy as stipulated in the Record of Decision include:

- Surface cover systems for the hazardous waste and municipal landfill area;
- Installation of a minimum of eight additional groundwater monitoring wells;
- Provision of an alternative water supply for selected residents near site;
- Imposition of on-site and off-site deed restrictions to prohibit specific actions; and
- Development and implementation of an operation and maintenance (O&M) plan for the remedy.

The estimated present worth cost for this remedial action is $4,000,000 with present worth O&M of $577,013.

### Remedy Implementation

**Remedy Component 1- Surface Cover**
A low permeability liner was installed over both the hazardous waste disposal area and the municipal waste disposal area. The municipal waste area liner consists of a 40 ml thick high density polyethylene (HDPE) liner. The hazardous waste area liner has an additional 0.25 inch thick bentonite liner. The liners are covered with 1.5 feet of sandy soil for better drainage. Two feet of soil is then layered on top of the liner. A vegetative layer was then used to secure the soil cover. Terracing was used to alleviate the steepness of the slope to reduce erosional issues. Other grading was done to divert stormwater away from either landfill cover.

**Remedy Component 2 – Installation of Groundwater Monitoring Wells**
The groundwater monitoring system was designed to yield samples from the uppermost aquifer that are representative of the water that passes through the downgradient area of the landfill site. There were two existing wells. Seven more were added (6 downgradient, 1 upgradient). These seven wells were installed during three separate field events.

**Remedy Component 3 – Alternate Water Source**
The alternate water supply system is owned and operated by the Fort Valley Utility Commission. The municipal water system was extended to include the properties possibly affected by the site. The Fort Valley Utility Commission conducts O & M on the water supply system.

**Remedy Component 4 – Institutional Controls**
Two types of notices were filed for the Powersville Site. A Record of Waste was filed with the local zoning authority. This record contains the type, location, and quantity of hazardous waste disposed of within each fill area. A Notation on Deed is the second type of notice that was filed. The notation states that the land has been used to manage hazardous waste and is therefore use restricted. The site itself and properties between it and the unnamed tributary to Mule Creek were required by the ROD to have deed restrictions placed upon them to prohibit the drilling of water wells or intrusive construction activities that might impact the integrity of the landfill covers. The method for executing the deed restrictions was through restrictive covenant agreements.

**Remedy Component 5– Operation & Maintenance Plan**

There are eight major tasks involved in the schedule for ordinary O&M activities. They are the following:

- Groundwater Monitoring - The ground-water monitoring program consists of quarterly groundwater monitoring. Groundwater samples are collected from nine monitoring wells (MW2, MW7, MW20, MW21, MW22, MW23, MW24, MW25 and MW26). All samples are analyzed for VOCs, Pesticides, and metals.
- Maintenance of Vegetation – Mowing of the covers and other vegetated site areas is conducted twice per year. Fertilization of the covers is conducted once per year. Lime may be added every four to six years to maintain a pH between 6 and 7.
- Cover Settlement – Inspection and monitoring for cover settlement was conducted quarterly for the first two years then semi-annually since that time.
- Site Structure – The following structures are inspected quarterly: concrete channels, rip rap, fence and signs, drainage areas, benchmarks, gas vents, settlement monitoring stations, all guard posts, and cover drainage pipes cleanout ports. Repairs are performed as needed.
- Gas Production Monitoring – Each gas vent is checked semi-annually for the first two years and has been annually since that time.
- Cost Estimate Updates – The cost estimate shall be updated annually.
- Deed Restrictions – The deed restrictions/covenant agreements remain in effect for a period of 20 years, beginning when the deed restrictions/agreements are executed. These are to be renewed for subsequent 20-year periods.
- Deliverables – Regular reports are submitted to the O&M administrator, which is Clean Sites.

**Performance Standards**
The EPA required that the preliminary remedial goals (PRGs) be referred to as remedial goal options (RGOs). The RGOs for groundwater at the site were developed for the future resident and they were calculated for the contaminants of concern in groundwater using the following equation: RGO = (TR x EC)/CR. Where RGO = Remedial Goal Options; TR = Target risk level (HQ = 1.0 for noncarcinogenic effects and risk level = 1E-06, 1E-06, and 1E-04 for carcinogenic effects); EC = Exposure concentration in soil and groundwater; and CR = Calculated risk level. The RGOs for soil were computed using the same equation. The cleanup goals for soil and

groundwater are shown on the following tables. The cleanup goals for surface water were considered to be the same as groundwater as implied by the ROD.

**Table 2**
**Cleanup Levels for Groundwater**

| Contaminant | Risk-Based GW Action Level (ug/L) | ARAR-Based GW Action Level (ug/L) |
|---|---|---|
| gamma-BHC | 4 | 0.2 |
| vinyl chloride | 1 | NA |
| 1,2-dichloroethane | 5 | NA |
| Lead | 50 | 4 |
| Chromium | 50 | 100 (Tot Cr) |

## V. Progress Since the Last Review

Conditions have been adequately maintained since the first five-year review.

The first five-year review for the site was completed on January 6, 1998. It focused on the remedial action to determine if it was operating and functioning as designed and that institutional controls were in place and were protective. The recommendations or follow-up actions from the first five-year review were:

- Reseed bare soil areas.
- Investigate drainage layer pipes to determine the location and potential link to the swampy area. If a problem is found, it should be repaired.
- Facility structures (transfer station building) and the Lizzie Chapel Church should be monitored for methane gas. In addition, subsurface soil at the landfill should be monitored for methane.
- The detection limit for Lindane should be lowered to 0.2 ug/L to allow for detection at the MCL.
- Peach County should assign a specific individual to perform regular inspection activities. This person should be educated on the design features of the landfill cover system.

The Director of Public Works for Peach County was interviewed about these and all other O&M issues. He indicated that reseeding bare soil and checking drainage pipe areas is part of normal maintenance. He also indicated that one specific person under his supervision has been assigned to be responsible for Powersville site maintenance. He keeps informed about the site and does drive by inspections himself. However, he is not aware of methane sampling being done at Lizzie Chapel Church. He will follow-up on this. Since Lindane is no longer detected in the groundwater, this change is noted but not relevant to this site.

## VI. Five-Year Review Process

The purpose of a five-year review is to determine whether the remedy at a site is protective of human health and the environment. A five-year review does not reconsider decisions made during the selection of the remedy, but evaluates the implementation and performance of the selected remedy.

**Document Review**

On 4 June 2003, Sherry McCumber-Kahn, Environmental Engineer, and Mark Harvison, Chemist, both with the US Army Corps of Engineers (USACE), Savannah District, met with the EPA Project Manager, Brian Farrier, and began reviewing the project files. Documents that were reviewed were related to site investigations, feasibility study, remedial design, the ROD, construction reports, and monitoring data. The complete list of documents is included as Attachment A.

**Data Review**

The Powersville EPA Superfund Site has had 22 (2 reports could not be located) sampling events performed by taking samples from 9 monitoring wells since January 1998. Based on the data from the latest round of monitoring, June 2003, the following contaminants were found to be above action levels: 1,2-dichloroethane, Chromium and Lead. The measured concentrations along with the action levels are arranged in the following table.

**Table 4**
**Contaminant Levels**

| Contaminant | Measured Concentrations (ug/L) | Risk-Based Action Level (ug/L) | ARAR-Based Action Level (ug/L) |
|---|---|---|---|
| Chromium | 74.5, 87.2, 198* | 50 | 100 |
| Lead | 65.6, 672, 29.3, 32.1 ** | 50 | 15 |

*Concentrations found at 3 wells: MW7, MW 24, & MW25 respectively.
**Concentrations found at 4 wells: SW 2, SW 7, MW 24, & MW25 respectively.

In the previous round of sampling (April 2003), monitoring well MW24 contained a concentration of 6 ug/L of 1,2-dichloroethane (both risk based and ARAR based action levels were 5 ug/L). The concentration of 6 ug/L was very close to the action levels. This round of sampling (June 2003) showed only "J" flagged results that were below the action level. In particular, MW24 had a result of 4J ug/L. It appears that 1,2-dichloroethane has attenuated to levels below MCLs at this site. The sample with the Chromium concentration of 74.5 ug/L had a duplicate sample with a concentration of 14.8 ug/L, which is below action levels. The highest concentration of chromium at this well previously was 3.3 ug/L in April 1998. This could indicate turbidity in the sample. Monitoring wells MW24 and MW25 do show a history of variable levels of Chromium. However this is the highest level to date for MW24. In the case of Lead, all 4 of these wells have a history of variable Lead concentrations. Monitoring wells MW2 and MW7 have consistently been higher than the other wells. In previous reports, this was attributed to the fact that they are constructed of galvanized steel. Lead is considered a by-product of galvanized steel degradation. Duplicate samples were taken at MW7, there is a 340% difference between the two Lead concentrations detected (672 ug/L and 198 ug/L). This could indicate turbidity. However, the lower concentration is still above action levels, indicating a problem.

**Site Inspection**
An inspection of the Powersville EPA Superfund site was performed by Sherry McCumber-Kahn and Mark Harvison, both with the US Army Corps of Engineers (USACE), Savannah District, on 11 June 2003. The inspection was performed not long after regular maintenance had been performed. Brian Farrier, Project Manager with EPA Region 4 and Eddie Williams, of GA EPD were also on-site during the inspection. The purpose of the inspection was to assess the protectiveness of the completed remedy. The inspection generally included visual observation of the perimeter fencing used to restrict access, the condition of the cap, and inspection of the areas immediately adjacent to the former landfill. The site inspection included both the areas of the geosynthetic clay liners (GCL) or cap and the areas immediately surrounding the liners. Most areas inspected had good grass cover. There were a couple of bare spots on the northern side of the terraced slope. This did not appear to pose an immediate problem and could possibly take care of itself. No undesirable vegetation was observed. There were areas of standing water. However, recent rains could very well have saturated the ground in that area. Areas around off-site wells were also visually inspected. The grass cover and the general appearance of the site can be seen from Photographs 1 through 12 in Attachment B to this report.

The protective measures employed, perimeter fencing and the landfill caps covering both the hazardous waste and municipal waste disposal areas, appear to be in good condition and performing their intended purpose. The cap and surrounding area appeared undisturbed. There were no observed uses of ground water in the immediate vicinity of the landfill.

**Interviews**

**Eddie Williams, GA EPD**
On 11 June 2003, Sherry McCumber-Kahn and Mark Harvison, visited the Powersville Superfund site. Eddie Williams was interviewed on the site as well as over the phone in a follow-up interview. Mr. Williams was familiar with the remedial action and has been involved in reviewing the groundwater monitoring data. He is satisfied that the site is well maintained. During follow-up interview, Mr. Williams indicated that he had recently received the results from the most recent round of groundwater sampling. He provided a copy of the results table as well as a page from the sampling crew's log that indicated heavy rains just prior to sampling.

**Scott Miller, Clean Sites**
Clean Sites is the site administrator for the former PRPs. Mr. Miller was interviewed by telephone on August 1, 2003. He indicated that he was satisfied that sampling and maintenance were going smoothly. When asked if he was aware of any institutional control problems, he answered "No." He was not certain, but thought that land records might be found on line. He said that at this time his involvement with the Powersville site is very limited. He does receive quarterly reports on the site. He gave me the name of the Director of Public Works for Peach County, Billy Segers. Mr. Miller thought that Mr. Segers might be the better person to speak to about maintenance and institutional control issues. During a telephone interview he provided the information that turbidity is not sampled for during groundwater monitoring. He did find out

that methane had been monitored for as of 1999, but that for some reason this is not been done currently.

**Billie Segars, Director of Public Works for Peach County, GA**
Mr. Segars was interviewed by telephone on August 5, 2003. He was very helpful. Recommendations from the previous 5-year review and normal O&M activities were discussed. He clarified that inspection of site structures takes place quarterly as opposed to semi-annually and that mowing and fertilization of the site takes place as scheduled in the O&M plan. The cost estimate updates required by the O&M plan are not done because Peach County takes care of the O&M themselves. He is not aware of any testing of pH of the soil being conducted. There does not appear to be a problem with the vegetation that would indicate a need. Also, he is not sure about methane monitoring being done at the site. He does not receive any reports related to that. He indicated his intention of following up on the methane monitoring issue. He will also increase his inspections for possible erosional and drainage problems because of recent heavy rains.

No other individuals familiar with the site and its status were interviewed.

## VII. Technical Assessment

Question A: Is the remedy functioning as intended by the decision documents?

The review of documents, ARARs, risk assumptions and analytical data and site inspections indicate the remedy is functioning as intended by the ROD. Groundwater contamination at the site persists above action levels. However, the levels are low and show no sign of migration. The cap is in good condition and should continue to prevent water from infiltrating any remaining soil contamination.

Question B: Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

There have been no physical changes in the site or surrounding properties that would affect the protectiveness of the remedy. Although the MCL for Lindane (gamma-BHC) has been lowered to 0.2ug/L, it does not affect the protectiveness of the remedy. There are no organic chemicals being detected above regulatory limits in the groundwater at this time.

ARARs identified and listed in the Powersville ROD addressed a broad range of federal chemical specific and action specific ARARs. As stated in the 5-year review guidance, the focus of an ARAR review should be limited to those ARARs that have the potential to impact human health and the environment and specifically address the protectiveness of the remedy. To that end, ARARs called out in the ROD that were associated with construction and operation and maintenance activities of the remedy are not addressed in this review. Those ARARs associated with the protection of the remedy are the specific focus of the review.

Of the ARARs listed in the ROD, the following Federal chemical-specific and action-specific ARARS were carried forward for assessment.

**Federal chemical-specific ARARs**

Safe Drinking Water Act (SDWA) Maximum Contaminant Levels (40 CFR 141 and 143) – Standards for select organic compounds, minerals, or metals that are enforceable standards for public drinking water systems. 40 CFR 141 and 143

**Federal action-specific ARARs**

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)

Superfund Amendment and Reauthorization Act (SARA)

Resource and Conservation Recovery Act (RCRA)

Clean Water Act

Clean Air Act

EPA Groundwater Protection Strategy

Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

No additional information has been identified that would call into question the protectiveness of the remedy.

Technical Assessment Summary

Based on the data reviewed, the site inspection and interviews with the PRP, the remedy is functioning as intended by the ROD. There have been no changes in the physical conditions of the site that would affect the protectiveness of the remedy. ARARs for drinking water were evaluated to determine if the remedy is still protective. Based on the ARAR review, no values of drinking water standards (i.e. MCLs) have changed to any degree that would negatively affect the protection of the remedy. The MCL for Lindane (gamma-BHC) has been lowered to 0.2ug/L, it does not affect the protectiveness of the remedy because the well that has had problems with lindane has not had a result above the risk based level. The last several sampling events have given results that were very close to the new MCL, but were J flagged. Groundwater contamination at the site persists above action levels and requires continued monitoring to ensure it does not migrate offsite. Also, it has been determined that the groundwater is being sampled using bailers. Since the only two contaminants remaining above action levels are metals, the sampling method should be reexamined. In addition, turbidity is not measured in the field. Since the recent spikes in Lead and Chromium levels could be associated with turbidity, adding this measurement should be considered.

## VIII. Issues

| Issue | Currently Affects Protectiveness (Y/N) | Affects Future Protectiveness (Y/N) |
|---|---|---|
| Groundwater contamination still detected above Action Levels | N | N |

## IX. Recommendations and Follow-Up Actions

| Issue | Recommendation/ Follow-Up Actions | Party Responsible | Oversight Agency | Milestone Date | Affects Protectiveness (Y/N) | |
|---|---|---|---|---|---|---|
| | | | | | Current | Future |
| Groundwater contamination | Continue monitoring to ensure that ground-water contamination is not migrating offsite. | PRP | EPA | | N | N |
| Groundwater sampling methods. | Reexamine use of bailer for sampling method. Consider adding turbidity as a measurement. Also, consider taking filtered and unfiltered samples. | | | | | |
| GW Well Installation | Door-to-door interview of landowners to make sure no new wells or major construction. | PRP | EPA | | N | Y |
| Methane Monitoring | Check with A-E and Director of Public Works for Peach County to reinstate methane monitoring if necessary. | PRP | EPA | | N | Y |

It is recommended that groundwater monitoring continue as there are still contaminants above action levels. Since bailers are used in the groundwater sampling of this site, reassessment of that method should be considered, because metals are the remaining contaminants. In addition, adding turbidity as a measurement and taking filtered and unfiltered samples should be considered. It is also recommended that a follow up of institutional controls be undertaken by the USEPA. A door-to-door interview of residents potentially affected by the site (those asked to sign deed restrictions) should be conducted to make sure that no new wells or intrusive construction activity has taken place since the last 5-Year Review. This is also recommended as a means of making sure that, if any properties have been sold, the new owners are aware of deed restrictions on their property. A 1999 report by Trebble & Richardson found by Clean Sites, indicated methane levels were checked twice a year. This is no longer the case It is recommended that the change in methane monitoring be checked out, and a plan be reinstated if necessary. The issue of methane movement was a concern from the first 5-year review.

## X. Protectiveness Statement

The remedial actions at the site are expected to be protective of human health and the environment upon attainment of ground-water cleanup goals. Contaminant levels in ground water appear to be declining to acceptable risk based concentrations. There is still a problem with metals. Continued groundwater monitoring is required to ensure contaminants are not migrating offsite.

## XI. Next Review

The next five-year review for the Powersville Superfund Site is required by August 2008, five years from the date of this review. This review should determine whether any contaminants still detected in the monitoring well network have declined to the required cleanup levels.

## Attachments

**Attachment A**
**List of Documents Reviewed**

1. Superfund Preliminary Site Close Out Report (Final Operable Unit Remedial Action), Powersville Landfill Superfund Site, Powersville, Peach County, Georgia, June 1993.

2. Operation and Maintenance Plan for Powersville Landfill NPL Site, Powersville, Georgia, Remedial Action, July 1993.

3. Revision 1 Five-Year Review Final Report, Powersville Landfill Site, Powersville, Peach County, Georgia. December 1997.

4. U.S. EPA, Record of Decision (ROD), Powersville Site, September 1987.

5. Tetra Tech, January 1998 Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

6. Tetra Tech, April Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

7. Tetra Tech, July 1998 Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

8. Tetra Tech, October 1998 Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

9. Tetra Tech, January 1999 Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

10. Tetra Tech, April 1999 Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

11. Tetra Tech, July 1999 Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

12. Tetra Tech, October 1999 Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

13. Tetra Tech, January 2000 Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

14. Tetra Tech, April 2000 Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

15. Tetra Tech, July 2000 Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

16. Tetra Tech, October 2000 Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

17. Tetra Tech, January 2001 Quarterly Sampling Report, Powersville Landfill NPL Site, Peach County, Georgia.

18. Roy F. Weston, Inc., Quarterly Monitoring Report, 1st Quarter 2001, Powersville Landfill NPL Site, Peach County, Georgia.

19. Roy F. Weston, Inc., Quarterly Monitoring Report, 2nd Quarter 2001, Powersville Landfill NPL Site, Peach County, Georgia.

20. Roy F. Weston, Inc., Quarterly Monitoring Report, 3rd Quarter 2001, Powersville Landfill NPL Site, Peach County, Georgia.

21. Roy F. Weston, Inc., Quarterly Monitoring Report, 4th Quarter 2001, Powersville Landfill NPL Site, Peach County, Georgia.

22. Roy F. Weston, Inc., Quarterly Monitoring Report, 2nd Quarter 2002, Powersville Landfill NPL Site, Peach County, Georgia.

23. Roy F. Weston, Inc., Quarterly Monitoring Report, 3rd Quarter 2002, Powersville Landfill NPL Site, Peach County, Georgia.

24. Roy F. Weston, Inc., Quarterly Monitoring Report, 1st Quarter 2003, Powersville Landfill NPL Site, Peach County, Georgia.

## Attachment B

## Images Documenting Site Conditions

**Photos taken June 11, 2003**

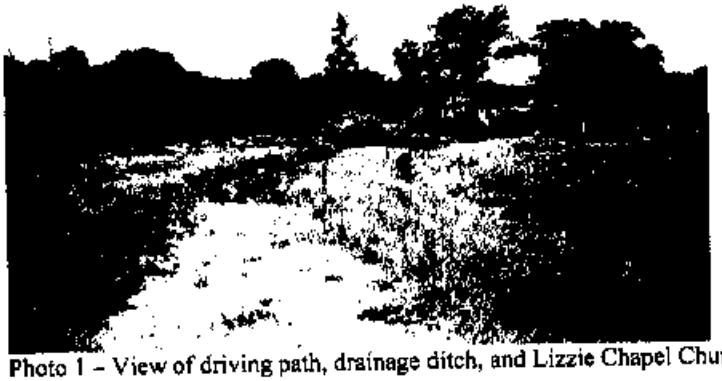

Photo 1 – View of driving path, drainage ditch, and Lizzie Chapel Church.

Photo 2 – View of sewage drainage cover near church.

Photo 3 – View of bermed area in western section of site.

Photo 4 – Small bare area in western section of site.

Photo 5 – Small area of standing water on a terrace in the eastern section of site.

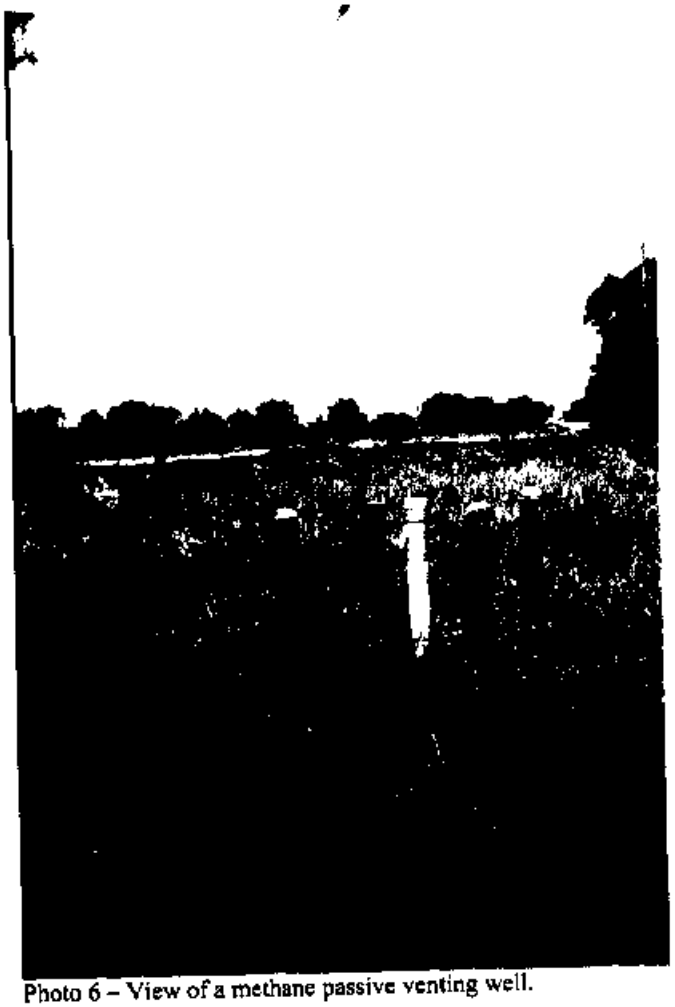

Photo 6 – View of a methane passive venting well.

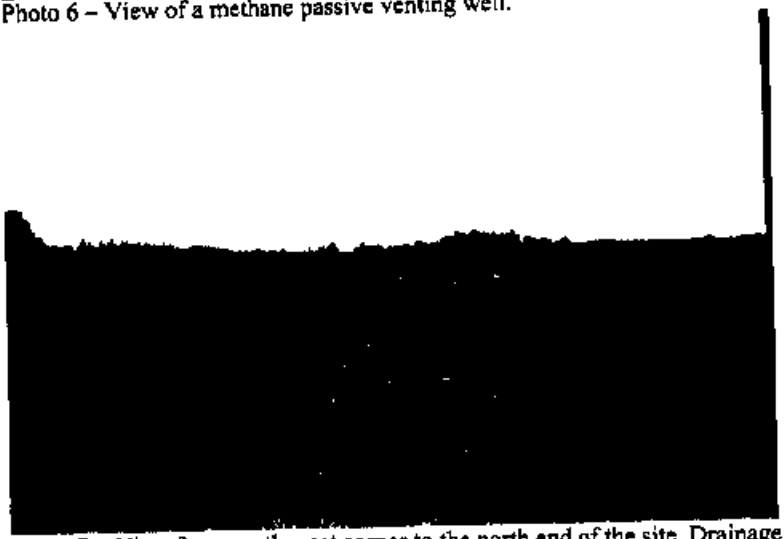

Photo 7 – View from south west corner to the north end of the site. Drainage features are evident, as well as, cap of hazardous waste area.

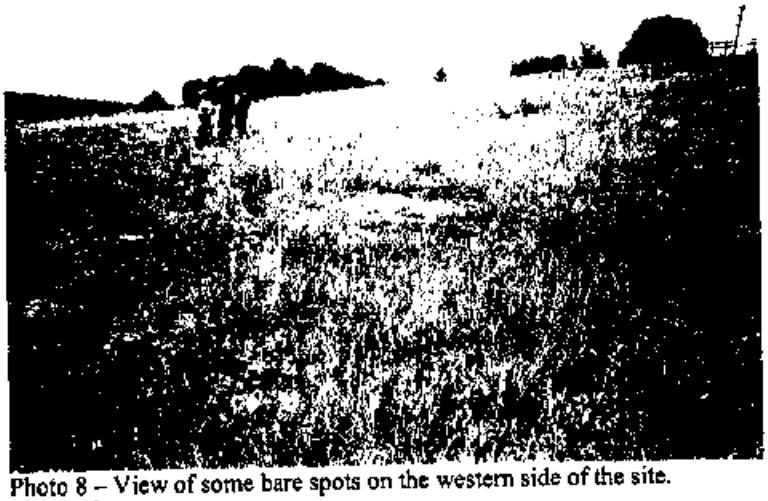

Photo 8 – View of some bare spots on the western side of the site.

Photo 9 – View of riprap in place to prevent erosion.

Photo 10 – View of cap of hazardous waste area.

Photo 11 – View of IDW barrels from recent sampling event.

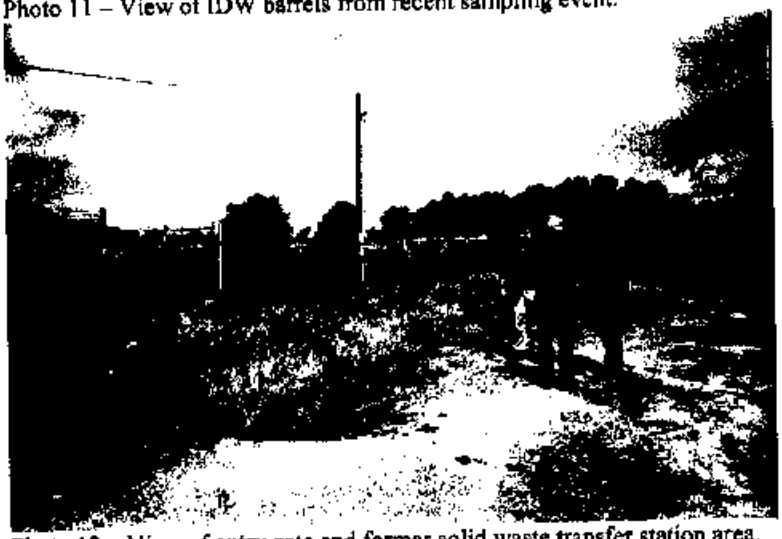

Photo 12 – View of entry gate and former solid waste transfer station area. Also, L-R: Mark Harvison, USACE; Brian Farrier, EPA; and Eddie Williams, GA EPD